epiTRENDS

A Monthly Bulletin on Epidemiology & Public Health Practice in Washington State

Vol. 2 No. 5

New Immunization Requirements for School Entry Will Take Effect in September 1997; Hepatitis B Added

Several new immunization requirements will take effect in September 1997 for children entering kindergarten, preschool, child care centers, and day care facilities in Washington State. The new requirements are based on recommendations (see table on page 2) adopted by the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, the American Academy of Family Physicans, and the Washington State Department of Health (DOH), and include:

• ***Hepatitis B Vaccine***: All kindergarteners and younger children entering preschool or day care will require a three-dose series of hepatitis B vaccine. The series must be administered over four months, so parents and practitioners should make certain that children needing vaccination receive the first dose immediately. Beginning in September 1998, immunization will be required for the small proportion of children who enter the school system at first grade rather than kindergarten.

• ***Pertussis Vaccine:*** Immunization against pertussis (whooping cough) has changed from a recommendation to a requirement. Most children are routinely immunized with the combined pertussis, diphtheria, and tetanus (DPT) vaccine. The number of DPT doses for first-time school entry remains at five.

• ***MMR Vaccine:*** A second dose of measles, mumps, and rubella (MMR) vaccine is now required, rather than just recommended, before a child's thirteenth birthday. Schools will accommodate this change by checking students' immunization records upon entry into sixth grade.

• ***Tetanus Vaccine:*** A "booster" dose of tetanus vaccine is recommended before a student's seventeenth birthday. Schools will be expected to notify graduating students about this requirement. However, students do not need to show evidence of compliance, nor will schools be expected to exclude students for lack of evidence or for noncompliance.

How to Encourage Compliance

Health care providers can do the following to ensure that children are immunized on time and to avoid a last-minute rush before school starts in September:

• Talk with parents and their children about the importance of timely childhood immunizations.

• Talk with colleagues and with office, hospital, and laboratory staff about the new requirements.

• Do an office "check-up" to assess childhood immunization rates within your practice. Free assessment software from the Centers for Disease Control and Prevention is available from local health jurisdictions.

• Contact local health jurisdictions to receive free state-supplied vaccine.

Many Children Do Not Receive Timely Immunizations

Although vaccinations are among the most effective preventive health measures, epidemics of vaccine-preventable disease still occur (see page 4) and many children are not immunized on time. The 1995 national immunization survey sponsored by the Centers for Disease Control and Prevention estimated that only 78% (±4.2%) of children aged 19–35 months in Washington State had completed the basic immunization series (four doses of diphtheria and tetanus toxoids and pertussis vaccine, three doses of oral polio virus vaccine, and one dose of

Continued page 2

In This Issue:

5.97

Immunizations *(from page 1)*

There is still work to be done to ensure that every child in this country gets an equal chance at a healthy life.

David Satcher, M.D.
Director,
Centers for Disease Control and Prevention

For More Information

If you have questions, comments, or would like to receive free patient educational materials, call the DOH Immunization Program at (360) 753-3495

measles-mumps-rubella vaccine). This cover-age level is well below the year 2000 goal of 90% completion set by the state and the U.S. Public Health Service.

A review of the literature conducted by the University of Washington and the State Department of Health in 1995 and 1996 revealed that a wide variety of factors are associated with underimmunization in populations of preschool children. No single risk factor or specific combination of factors reliably predict the risk of underimmunization for an individual child.

Child and Family Characteristics

Two strong and consistent risk factors for underimmunization were delayed initiation of the immunization series and inadequate prenatal care. Children who receive their first immunization after three months of age are three to four times more likely to be underimmunized at two years than are those who start the series on time. Children of women who begin prenatal care after the first trimester are one and a half to three times more likely to be underimmunized than are children of women initiating care in the first trimester. Fewer numbers of well-child visits, particularly in the second year of life, and missed appointments were also associated with underimmunization.

Lower socioeconomic status, lack of health insurance, single-parent families, larger numbers of children in the family, lower parental education level, inner-city residence, and frequent residential moves were other child and family characteristics that were often associated with lower immunization rates. These factors may help to identify high-risk groups, but they are not directly amenable to interventions such as public health immunization programs.

Provider, Health System, and Administrative Characteristics

Recent studies documenting underimmunization in all population groups have pointed to the critical role of providers and their practices. Missed opportunities — health care encounters in which a child is eligible to receive a vaccination but is not vaccinated — contribute significantly to underimmunization. Major reasons for missed opportunities include:

- lack of provider knowledge about immunization status;
- lack of simultaneous administration of immunizations; and,
- inappropriate interpretation of contraindications.

Health system and administrative characteristics (such as limited clinic hours) are perceived to be barriers but have not been adequately studied to assess their

Continued page 4

TABLE: Recommended Childhood Immunization Schedule for 1997

Age ➤	Months								Years		
Vaccine ▼	Birth	1	2	4	6	12	15	18	4–6	11–12	14–16
Hepatitis B	Hep B-1	Hep B-2			Hep B-3					Hep B*#	
Diphtheria, Tetanus Pertussis			DTaP or DTP	DTaP or DTP	DTaP or DTP		DTaP or DTP*		DTaP or DTP	Td	
H. influenzae, type b			Hib	Hib	Hib*		Hib*				
Polio			Polio*	Polio		Polio*			Polio		
Measles, Mumps, Rubella							MMR		MMR* or MMR*		
Varicella (chickenpox)						Var				Var*#	

This schedule indicates the recommended age for routine administration of currently licensed childhood vaccines. Horizontal lines indicate range of acceptable ages for vaccination. *Further details provided in footnotes, which could not be printed here; # are ages for catch-up vaccination. Call 360-753-3495 to request a schedule with footnotes. Some combination vaccines are available and may be used whenever administration of all components of the vaccine is indicated. Providers should consult the manufacturers' recommendations. This schedule is approved by the Advisory Committee on Immunization Practice, the American Academy of Pediatrics, and the American Academy of Family Physicians.

Monthly Surveillance Data by County

April 1997* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead§#
Adams	0	1	0	0	0	0	0	0	0	3	0	0	4	0/#
Asotin	0	0	0	0	0	0	0	0	0	2	0	1	0	0/0
Benton	0	5	0	0	0	0	0	0	0	9	0	0	2	0/25
Chelan	0	0	0	3	0	0	0	1	0	4	0	0	2	2/#
Clallam	0	0	0	0	0	1	1	0	0	2	1	0	0	0/0
Clark	0	0	0	2	1	0	5	1	0	42	4	5	1	0/#
Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Cowlitz	0	2	0	0	0	0	0	0	0	6	0	0	0	0/6
Douglas	0	0	0	4	0	0	0	0	0	3	0	0	0	0/0
Ferry	0	0	0	0	0	0	1	0	0	1	0	0	0	0/0
Franklin	0	0	0	0	0	0	0	0	0	5	0	0	0	0/#
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	0	0	1	0	0	0	0	0	17	0	0	4	0/#
Grays Harbor	0	1	1	0	0	0	1	16	0	8	2	1	0	0/0
Island	0	0	0	0	0	0	0	3	0	5	0	0	0	0/#
Jefferson	0	0	0	0	0	0	0	0	0	2	0	0	0	0/#
King	0	1	1	10	0	0	2	17	0	288	63	12	3	1/117
Kitsap	0	0	0	0	0	0	0	1	0	46	6	2	0	0/29
Kittitas	0	0	0	1	0	2	0	1	0	3	0	0	0	0/#
Klickitat	0	0	0	1	0	0	0	0	0	0	0	0	1	0/0
Lewis	0	0	0	0	0	0	0	0	0	6	2	0	0	0/#
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Mason	0	0	0	2	0	0	0	0	0	5	0	1	0	0/#
Okanogan	0	0	4	0	0	0	0	0	0	8	0	0	2	0/#
Pacific	0	0	0	0	0	0	0	0	0	2	2	0	1	0/#
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Pierce	0	4	0	2	3	0	0	1	0	128	46	10	3	0/114
San Juan	0	0	0	0	0	0	0	0	0	2	0	0	0	0/0
Skagit	0	0	0	7	0	0	2	0	0	14	0	0	1	0/5
Skamania	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Snohomish	1	2	1	4	1	0	2	6	0	78	14	1	1	0/8
Spokane	0	1	0	6	0	0	0	1	0	57	13	3	0	1/35
Stevens	0	0	0	0	0	0	0	0	0	10	1	1	0	0/#
Thurston	0	0	0	3	0	0	0	1	0	40	4	2	1	0/15
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Walla Walla	0	1	0	0	0	0	0	0	0	5	0	0	2	0/5
Whatcom	0	0	0	7	0	0	0	1	0	25	3	1	1	1/#
Whitman	0	1	0	0	0	0	0	0	0	7	0	0	0	0/#
Yakima	0	29	6	4	0	0	3	4	0	46	5	1	1	0/27
Unknown														1/3
Current Month	1	48	13	57	5	3	17	54	0	880	166	41	30	7/414
April 1996	5	35	27	54	13	2	7	35	0	633	152	48	37	19/330
1997 to date	9	140	43	195	19	9	43	129	0	3165	704	237	59	46/1446
1996 to date	9	156	73	182	33	25	36	62	0	3083	780	278	73	50/1130

* Data are provisional based on reports received as of April 30, unless otherwise noted.
† Unconfirmed reports of illness associated with pesticide exposure.
§# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.

Update on Preventable Disease Outbreaks in Northwest Region

WWW
Access Tips

The Department of Health posts the recommended childhood immunization schedule at: http://www.doh.wa.gov/topics/immunize.htm

Despite the availability and increasing use of effective vaccines, epidemics of vaccine-preventable diseases continue to occur. An epidemic of pertussis in northern Idaho totaled 187 cases as of April 30, most in northern Idaho near Spokane. The number of reported cases nationally in the first three months of 1997 has increased 83% over the same period last year, according to the Centers for Disease Control and Prevention.

The recent measles epidemic in British Columbia totaled 304 cases as of April 15, with 122 cases laboratory confirmed. B.C. health authorities observed three large waves of cases. Alberta also reported 51 measles cases; one California case has been linked to exposure in Canada. As this issue went to press an epidemic of rubella in Manitoba had reached 2385 reported cases, primarily in adolescent boys; this case distribution reflects the province's immunization policy, which until 1993 was to immunize only preadolescent girls so as to prevent congenital rubella syndrome. Nevada and Oregon have each reported one case of toxigenic diphtheria since January 1. Since 1980, no more than five cases of toxigenic diphtheria have been reported in a year in the United States.

Immunizations *(from page 2)*

effect on immunization rates. Evidence is insufficient to determine whether cost of the vaccine or the office visit are risk factors for underimmunization. In contrast, studies consistently show that reminder and recall systems increase immunization coverage.

Multiple Interventions Are Needed

An important caveat in interpreting the results of the literature review is that the studies examined were difficult to compare or generalize due to differences in methods (e.g., definitions for coverage, child's age at time of data collection, population examined). Furthermore, the risk factors identified do not imply that these factors cause underimmunization, but merely that children with these factors are more likely to be underimmunized. Thus, these factors may act as markers identifying groups of children who may potentially benefit from targeted interventions.

Because no single factor or combination of factors fully account for underimmunization, achieving and sustaining high immunization coverage rates will require a variety of interventions with both providers and parents to start the immunization series on time, to ensure that children maintain contact with the health care system, and to maximize the effectiveness of every contact. Efforts to monitor and reduce childhood underimmunization in Washington State include continued collaborations between the State Department of Health, local public health agencies, other state and local agencies, and providers of health care for children. Activities address provider education, parental awareness, and expanded outreach to at-risk populations.

*epi*TRENDS is published monthly by the Washington State Department of Health.

Bruce Miyahara, MHA
Secretary

Mimi L. Fields, MD, MPH
Deputy Secretary and State Health Officer

Paul Stehr-Green, DrPH, MPH
State Epidemiologist

Sandra L. Marvinney, BA
Managing Editor

Marcia J. Goldoft, MD, MPH
Scientific Editor

Washington State Department of Health
*epi*TRENDS
P.O. Box 47812
Olympia, WA 98504-7812

BULK RATE
U.S. Postage
PAID
Washington State
Dept. of Printing